

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/532,868

CRF Edit Date: 5/12/05
Edited by: AK

Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

Corrected the SEQ ID NO. Sequence numbers edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Deleted: invalid beginning/end-of-file text ; page numbers

Inserted mandatory headings/numeric identifiers, specifically:

Moved responses to same line as heading/numeric identifier, specifically:

Other:



PCT

RAW SEQUENCE LISTING DATE: 05/12/2005
 PATENT APPLICATION: US/10/532,868 TIME: 17:12:14

Input Set : A:\PTO.AMC.txt
 Output Set: N:\CRF4\05122005\J532868.raw

3 <110> APPLICANT: Commissariat a l Etude Atomique (CEA)
 4 Centre National de la Recherche Scientifique (CNRS)
 6 <120> TITLE OF INVENTION: A method for performing restrained dynamics docking of one
 or
 7 multiple substrates on multi-specific enzymes
 9 <130> FILE REFERENCE: D20647
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/532,868
 C--> 11 <141> CURRENT FILING DATE: 2005-04-28
 11 <150> PRIOR APPLICATION NUMBER: US 60/421,569
 12 <151> PRIOR FILING DATE: 2002-10-28
 14 <160> NUMBER OF SEQ ID NOS: 18
 16 <170> SOFTWARE: PatentIn version 3.2
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 403
 20 <212> TYPE: PRT
 21 <213> ORGANISM: Fusarium oxysporum
 23 <220> FEATURE:
 24 <223> OTHER INFORMATION: P450 Nor, crystal structure from
 26 <400> SEQUENCE: 1
 28 Met Ala Ser Gly Ala Pro Ser Phe Pro Phe Ser Arg Ala Ser Gly Pro
 29 1 5 10 15
 31 Glu Pro Pro Ala Glu Phe Ala Lys Leu Arg Ala Thr Asn Pro Val Ser
 32 20 25 30
 34 Gln Val Lys Leu Phe Asp Gly Ser Leu Ala Trp Leu Val Thr Lys His
 35 35 40 45
 37 Lys Asp Val Cys Phe Val Ala Thr Ser Glu Lys Leu Ser Lys Val Arg
 38 50 55 60
 40 Thr Arg Gln Gly Phe Pro Glu Leu Ser Ala Ser Gly Lys Gln Ala Ala
 42 65 70 75 80
 44 Lys Ala Lys Pro Thr Phe Val Asp Met Asp Pro Pro Glu His Met His
 45 85 90 95
 47 Gln Arg Ser Met Val Glu Pro Thr Phe Thr Pro Glu Ala Val Lys Asn
 48 100 105 110
 50 Leu Gln Pro Tyr Ile Gln Arg Thr Val Asp Asp Leu Leu Glu Gln Met
 51 115 120 125
 53 Lys Gln Lys Gly Cys Ala Asn Gly Pro Val Asp Leu Val Lys Glu Phe
 54 130 135 140
 56 Ala Leu Pro Val Pro Ser Tyr Ile Ile Tyr Thr Leu Leu Gly Val Pro
 57 145 150 155 160
 59 Phe Asn Asp Leu Glu Tyr Leu Thr Gln Gln Asn Ala Ile Arg Thr Asn
 60 165 170 175
 62 Gly Ser Ser Thr Ala Arg Glu Ala Ser Ala Ala Asn Gln Glu Leu Leu
 63 180 185 190
 65 Asp Tyr Leu Ala Ile Leu Val Glu Gln Arg Leu Val Glu Pro Lys Asp

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/532,868

DATE: 05/12/2005

TIME: 17:12:14

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05122005\J532868.raw

66	195	200	205
68	Asp Ile Ile Ser Lys Leu Cys Thr Glu Gln Val Lys Pro Gly Asn Ile		
69	210	215	220
71	Asp Lys Ser Asp Ala Val Gln Ile Ala Phe Leu Leu Leu Val Ala Gly		
72	225	230	235
74	240		
75	Asn Ala Thr Met Val Asn Met Ile Ala Leu Gly Val Ala Thr Leu Ala		
77	245	250	255
78	Gln His Pro Asp Gln Leu Ala Gln Leu Lys Ala Asn Pro Ser Leu Ala		
79	260	265	270
80	Pro Gln Phe Val Glu Glu Leu Cys Arg Tyr His Thr Ala Ser Ala Leu		
81	275	280	285
83	Ala Ile Lys Arg Thr Ala Lys Glu Asp Val Met Ile Gly Asp Lys Leu		
84	290	295	300
86	Val Arg Ala Asn Glu Gly Ile Ile Ala Ser Asn Gln Ser Ala Asn Arg		
87	305	310	315
89	320		
90	Asp Glu Glu Val Phe Glu Asn Pro Asp Glu Phe Asn Met Asn Arg Lys		
92	325	330	335
93	Trp Pro Pro Gln Asp Pro Leu Gly Phe Gly Phe Gly Asp His Arg Cys		
94	340	345	350
95	Ile Ala Glu His Leu Ala Lys Ala Glu Leu Thr Thr Val Phe Ser Thr		
96	355	360	365
98	Leu Tyr Gln Lys Phe Pro Asp Leu Lys Val Ala Val Pro Leu Gly Lys		
99	370	375	380
101	Ile Asn Tyr Thr Pro Leu Asn Arg Asp Val Gly Ile Val Asp Leu Pro		
102	385	390	395
103	400		
104	Val Ile Phe		
107	<210> SEQ ID NO: 2		
108	<211> LENGTH: 403		
109	<212> TYPE: PRT		
110	<213> ORGANISM: Saccharopolyspora erythraea		
112	<220> FEATURE:		
113	<223> OTHER INFORMATION: P450 EryF, crystal structure 1oxa		
115	<400> SEQUENCE: 2		
117	Ala Thr Val Pro Asp Leu Glu Ser Asp Ser Phe His Val Asp Trp Tyr		
118	1	5	10
119	15		
120	Ser Thr Tyr Ala Glu Leu Arg Glu Thr Ala Pro Val Thr Pro Val Arg		
121	20	25	30
122			
123	Phe Leu Gly Gln Asp Ala Trp Leu Val Thr Gly Tyr Asp Glu Ala Lys		
124	35	40	45
125			
126	Ala Ala Leu Ser Asp Leu Arg Leu Ser Ser Asp Pro Lys Lys Lys Tyr		
127	50	55	60
128			
129	Pro Gly Val Glu Val Glu Phe Pro Ala Tyr Leu Gly Phe Pro Glu Asp		
130	65	70	75
131	80		
132	Val Arg Asn Tyr Phe Ala Thr Asn Met Gly Thr Ser Asp Pro Pro Thr		
133	85	90	95
134			
135	His Thr Arg Leu Arg Lys Leu Val Ser Gln Glu Phe Thr Val Arg Arg		
136	100	105	110
137			
138	Val Glu Ala Met Arg Pro Arg Val Glu Gln Ile Thr Ala Glu Leu Leu		
139	115	120	125

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/532,868

DATE: 05/12/2005
TIME: 17:12:14

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\05122005\J532868.raw

141 Asp Glu Val Gly Asp Ser Gly Val Val Asp Ile Val Asp Arg Phe Ala
142 130 135 140
144 His Pro Leu Pro Ile Lys Val Ile Cys Glu Leu Leu Gly Val Asp Glu
145 145 150 155 160
147 Ala Ala Arg Gly Ala Phe Gly Arg Trp Ser Ser Glu Ile Leu Val Met
148 165 170 175
150 Asp Pro Glu Arg Ala Glu Gln Arg Gly Gln Ala Ala Arg Glu Val Val
151 180 185 190
153 Asn Phe Ile Leu Asp Leu Val Glu Arg Arg Arg Thr Glu Pro Gly Asp
154 195 200 205
156 Asp Leu Leu Ser Ala Leu Ile Ser Val Gln Asp Asp Asp Asp Gly Arg
157 210 215 220
159 Leu Ser Ala Asp Glu Leu Thr Ser Ile Ala Leu Val Leu Leu Leu Ala
160 225 230 235 240
162 Gly Phe Glu Ala Ser Val Ser Leu Ile Gly Ile Gly Thr Tyr Leu Leu
163 245 250 255
165 Leu Thr His Pro Asp Gln Leu Ala Leu Val Arg Ala Asp Pro Ser Ala
166 260 265 270
168 Leu Pro Asn Ala Val Glu Glu Ile Leu Arg Tyr Ile Ala Pro Pro Glu
169 275 280 285
171 Thr Thr Thr Arg Phe Ala Ala Glu Glu Val Glu Ile Gly Gly Val Ala
172 290 295 300
174 Ile Pro Gln Tyr Ser Thr Val Leu Val Ala Asn Gly Ala Ala Asn Arg
175 305 310 315 320
177 Asp Pro Ser Gln Phe Pro Asp Pro His Arg Phe Asp Val Thr Arg Asp
178 325 330 335
180 Thr Arg Gly His Leu Ser Phe Gly Gln Gly Ile His Phe Cys Met Gly
181 340 345 350
183 Arg Pro Leu Ala Lys Leu Glu Gly Glu Val Ala Leu Arg Ala Leu Phe
184 355 360 365
186 Gly Arg Phe Pro Ala Leu Ser Leu Gly Ile Asp Ala Asp Asp Val Val
187 370 375 380
189 Trp Arg Arg Ser Leu Leu Leu Arg Gly Ile Asp His Leu Pro Val Arg
190 385 390 395 400
192 Leu Asp Gly
195 <210> SEQ ID NO: 3
196 <211> LENGTH: 412
197 <212> TYPE: PRT
198 <213> ORGANISM: Pseudomonas sp.
200 <220> FEATURE:
201 <223> OTHER INFORMATION: P450 Terp, crystal structure 1cpt
203 <400> SEQUENCE: 3
205 Met Asp Ala Arg Ala Thr Ile Pro Glu His Ile Ala Arg Thr Val Ile
206 1 5 10 15
208 Leu Pro Gln Gly Tyr Ala Asp Asp Glu Val Ile Tyr Pro Ala Phe Lys
209 20 25 30
211 Trp Leu Arg Asp Glu Gln Pro Leu Ala Met Ala His Ile Glu Gly Tyr
212 35 40 45
214 Asp Pro Met Trp Ile Ala Thr Lys His Ala Asp Val Met Gln Ile Gly

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/532,868

DATE: 05/12/2005
TIME: 17:12:14

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\05122005\J532868.raw

215 50 55 60
 217 Lys Gln Pro Gly Leu Phe Ser Asn Ala Glu Gly Ser Glu Ile Leu Tyr
 218 65 70 75 80
 220 Asp Gln Asn Asn Glu Ala Phe Met Arg Ser Ile Ser Gly Gly Cys Pro
 221 85 90 95
 223 His Val Ile Asp Ser Leu Thr Ser Met Asp Pro Pro Thr His Thr Ala
 224 100 105 110
 226 Tyr Arg Gly Leu Thr Leu Asn Trp Phe Gln Pro Ala Ser Ile Arg Lys
 227 115 120 125
 229 Leu Glu Glu Asn Ile Arg Arg Ile Ala Gln Ala Ser Val Gln Arg Leu
 230 130 135 140
 232 Leu Asp Phe Asp Gly Glu Cys Asp Phe Met Thr Asp Cys Ala Leu Tyr
 233 145 150 155 160
 235 Tyr Pro Leu His Val Val Met Thr Ala Leu Gly Val Pro Glu Asp Asp
 236 165 170 175
 238 Glu Pro Leu Met Leu Lys Leu Thr Gln Asp Phe Phe Gly Val Glu Ala
 239 180 185 190
 241 Ala Arg Arg Phe His Glu Thr Ile Ala Thr Phe Tyr Asp Tyr Phe Asn
 242 195 200 205
 244 Gly Phe Thr Val Asp Arg Arg Ser Cys Pro Lys Asp Asp Val Met Ser
 245 210 215 220
 247 Leu Leu Ala Asn Ser Lys Leu Asp Gly Asn Tyr Ile Asp Asp Lys Tyr
 248 225 230 235 240
 250 Ile Asn Ala Tyr Tyr Val Ala Ile Ala Thr Ala Gly His Asp Thr Thr
 251 245 250 255
 253 Ser Ser Ser Gly Gly Ala Ile Ile Gly Leu Ser Arg Asn Pro Glu
 254 260 265 270
 256 Gln Leu Ala Leu Ala Lys Ser Asp Pro Ala Leu Ile Pro Arg Leu Val
 257 275 280 285
 259 Asp Glu Ala Val Arg Trp Thr Ala Pro Val Lys Ser Phe Met Arg Thr
 260 290 295 300
 262 Ala Leu Ala Asp Thr Glu Val Arg Gly Gln Asn Ile Lys Arg Gly Asp
 263 305 310 315 320
 265 Arg Ile Met Leu Ser Tyr Pro Ser Ala Asn Arg Asp Glu Glu Val Phe
 266 325 330 335
 268 Ser Asn Pro Asp Glu Phe Asp Ile Thr Arg Phe Pro Asn Arg His Leu
 269 340 345 350
 271 Gly Phe Gly Trp Gly Ala His Met Cys Leu Gly Gln His Leu Ala Lys
 272 355 360 365
 274 Leu Glu Met Lys Ile Phe Phe Glu Glu Leu Leu Pro Lys Leu Lys Ser
 275 370 375 380
 277 Val Glu Leu Ser Gly Pro Pro Arg Leu Val Ala Thr Asn Phe Val Gly
 278 385 390 395 400
 280 Gly Pro Lys Asn Val Pro Ile Arg Phe Thr Lys Ala
 281 405 410
 283 <210> SEQ ID NO: 4
 284 <211> LENGTH: 414
 285 <212> TYPE: PRT
 286 <213> ORGANISM: Pseudomonas putida

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/532,868

DATE: 05/12/2005
TIME: 17:12:14

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\05122005\J532868.raw

288 <220> FEATURE:
289 <223> OTHER INFORMATION: P450 Cam, crystal structure 3cpp
291 <400> SEQUENCE: 4
293 Thr Thr Glu Thr Ile Gln Ser Asn Ala Asn Leu Ala Pro Leu Pro Pro
294 1 5 10 15
296 His Val Pro Glu His Leu Val Phe Asp Phe Asp Met Tyr Asn Pro Ser
297 20 25 30
299 Asn Leu Ser Ala Gly Val Gln Glu Ala Trp Ala Val Leu Gln Glu Ser
300 35 40 45
302 Asn Val Pro Asp Leu Val Trp Thr Arg Cys Asn Gly Gly His Trp Ile
303 50 55 60
305 Ala Thr Arg Gly Gln Leu Ile Arg Glu Ala Tyr Glu Asp Tyr Arg His
306 65 70 75 80
308 Phe Ser Ser Glu Cys Pro Phe Ile Pro Arg Glu Ala Gly Glu Ala Tyr
309 85 90 95
311 Asp Phe Ile Pro Thr Ser Met Asp Pro Pro Glu Gln Arg Gln Phe Arg
312 100 105 110
314 Ala Leu Ala Asn Gln Val Val Gly Met Pro Val Val Asp Lys Leu Glu
315 115 120 125
317 Asn Arg Ile Gln Glu Leu Ala Cys Ser Leu Ile Glu Ser Leu Arg Pro
318 130 135 140
320 Gln Gly Gln Cys Asn Phe Thr Glu Asp Tyr Ala Glu Pro Phe Pro Ile
321 145 150 155 160
323 Arg Ile Phe Met Leu Leu Ala Gly Leu Pro Glu Glu Asp Ile Pro His
324 165 170 175
326 Leu Lys Tyr Leu Thr Asp Gln Met Thr Arg Pro Asp Gly Ser Met Thr
327 180 185 190
329 Phe Ala Glu Ala Lys Glu Ala Leu Tyr Asp Tyr Leu Ile Pro Ile Ile
330 195 200 205
332 Glu Gln Arg Arg Gln Lys Pro Gly Thr Asp Ala Ile Ser Ile Val Ala
333 210 215 220
335 Asn Gly Gln Val Asn Gly Arg Pro Ile Thr Ser Asp Glu Ala Lys Arg
336 225 230 235 240
338 Met Cys Gly Leu Leu Leu Val Gly Gly Leu Asp Thr Val Val Asn Phe
339 245 250 255
341 Leu Ser Phe Ser Met Glu Phe Leu Ala Lys Ser Pro Glu His Arg Gln
342 260 265 270
344 Glu Leu Ile Glu Arg Pro Glu Arg Ile Pro Ala Ala Cys Glu Glu Leu
345 275 280 285
347 Leu Arg Arg Phe Ser Leu Val Ala Asp Gly Arg Ile Leu Thr Ser Asp
348 290 295 300
350 Tyr Glu Phe His Gly Val Gln Leu Lys Lys Gly Asp Gln Ile Leu Leu
351 305 310 315 320
353 Pro Gln Met Leu Ser Gly Leu Asp Glu Arg Glu Asn Ala Cys Pro Met
354 325 330 335
356 His Val Asp Phe Ser Arg Gln Lys Val Ser His Thr Thr Phe Gly His
357 340 345 350
359 Gly Ser His Leu Cys Leu Gly Gln His Leu Ala Arg Arg Glu Ile Ile
360 355 360 365

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/532,868

DATE: 05/12/2005

TIME: 17:12:15

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05122005\J532868.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date